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## General Thoracic Surgery (GTS)

### 1294 Feasibility and safety of the airway bypass procedure for patients with emphysema

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This study confirms that passages can be made safely through the airways of human subjects. These clinical results support further investigation of the efficacy of the airway bypass procedure in patients with emphysema.

### 1300 Usefulness of low-dose spiral CT of the chest in regular follow-up of postoperative non-small cell lung cancer patients: Preliminary report

*Chao-Hua Chiu, MD, Ming-Sheng Chern, MD, Mei-Han Wu, MD, Wen-Hu Hsu, MD, Yu-Chung Wu, MD, Min-Hsiung Huang, MD, and Shi-Chuan Chang, MD, PhD, Taipei, Taiwan, Republic of China*

Regular follow-up of postoperative non-small cell lung cancer patients is of clinical importance because of the high rate of tumor recurrence. Our results suggested that low-dose spiral CT of the chest is of considerable value in early detection of tumor recurrence.

### 1306 Reliable cervical anastomosis through the retrosternal route with stepwise gastric tube

*Yoshifumi Ikeda, MD, Shoichi Tobari, MD, Masanori Niimi, MD, PhD, Shigenao Kan, MD, Hiroshi Takami, MD, and Susumu Kodaira, MD, Tokyo, Japan*

Although stepwise construction of the gastric tube results in a longer tube, blood flow was maintained. This technique allowed the anastomosis to be performed at a tension-free anastomotic line with better blood flow on the gastric tube, and anastomotic leakage was significantly decreased.

### 1313 The sequence of vessel interruption during lobectomy for non-small cell lung cancer: Is it indeed important?

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A historical prospective study was performed of 279 consecutive patients with complete follow-up, who survived lobectomy for non-small cell lung cancer during 1992 to 1998 in a single center. Our results did not show that sequence of vessel interruption during lobectomy plays a role in tumor recurrence. A prospective study with randomization in selection of method as well as surgeons for each patient is needed to confirm these results.

## 1321 Pulmonary fibrosis and lung cancer: Risk and benefit analysis of pulmonary resection

*P. Kumar, FRCS, P. Goldstraw, FRCS, K. Yamada, MD, A. G. Nicholson, DM, A. U. Wells, FRCP, D. M. Hansell, FRCR, R. M. duBois, FRCP, and G. Ladas, FECTS, London, United Kingdom*

Patients with pulmonary fibrosis undergoing pulmonary resection for non-small cell lung cancer have increased postoperative morbidity and mortality, but an important subgroup has a good long-term outcome. Postoperative acute respiratory distress syndrome is associated with low preoperative gas transfer ( $K_{CO}$ ,  $DL_{CO}$ ) and a high composite physiological index. Resection of non-small cell lung cancer is appropriate in pulmonary fibrosis, provided that the level of functional impairment is carefully factored into patient selection.

## 1328 Adenoviral melanoma differentiation-associated gene 7 induces apoptosis in lung cancer cells through mitochondrial permeability transition-independent cytochrome c release

*Abujiang Pataer, MD, PhD, Sunil Chada, PhD, Kelly K. Hunt, MD, Jack A. Roth, MD, and Stephen G. Swisher, MD, Houston, Tex*

Adenovirally mediated gene transfer of mda-7 induced apoptosis in p53-sensitive and p53-resistant lung cancer cell lines through MPT-independent cytochrome c release. These results suggest that gene transfer of mda-7 may represent a novel strategy to treat patients with lung cancer resistant to MPT-dependent cell death processes.

## 1336 Fas-associating death domain protein overexpression induces apoptosis in lung cancer cells

*Peter K. M. Kim, MD, Sang-Youel Park, PhD, Patrick P. Koty, PhD, Yun Hua, BA, James D. Luketich, MD, and Timothy R. Billiar, MD, Pittsburgh, Pa*

To address the need for new approaches to lung cancer treatment, an adenoviral vector was developed that expresses the FADD gene. We have demonstrated in vitro that FADD overexpression could induce dose-dependent activation of caspases and subsequent apoptosis in A549 and NCI-H226 human lung cancer cells.

## 1343 Submucosal territory of the direct lymphatic drainage system to the thoracic duct in the human esophagus

*Kenshi Kuge, MD, Gen Murakami, MD, Shunji Mizobuchi, MD, Yoichi Hata, MD, Takashi Aikou, MD, and Shiro Sasaguri, MD, Kochi, Sapporo, and Kagoshima, Japan*

Lymphatic drainage territorial unit was investigated using selected 28 esophagi with or without direct connecting vessels from the thoracic esophagus to the thoracic duct. In the direct drainage cases, the unit was extended longitudinally but restricted transversely to the dorsal and/or right quadrants of the submucosa. The most danger area can be restricted in superficial esophageal carcinoma.

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## Surgery for Acquired Cardiovascular Disease (ACD)

### 1350 Repair versus replacement for degenerative mitral valve disease with coexisting ischemic heart disease ▲

*A. Marc Gillinov, MD, Christiano Faber, MD, Penny L. Houghtaling, MS, Eugene H. Blackstone, MD, Buu-Khanh Lam, MD, Ramon Diaz, MD, Bruce W. Lytle, MD, Joseph F. Sabik III, MD, and Delos M. Cosgrove III, MD, Cleveland, Ohio*

In patients with degenerative mitral valve disease and coexisting ischemic heart disease, mitral valve repair confers a survival advantage over replacement that becomes evident about 2 years after surgery.

### 1363 Radial artery patency and clinical outcomes: Five-year interim results of a randomized trial

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This prospective randomized trial compared the elective angiographic patency of the radial artery with that of the free right internal thoracic artery or saphenous vein and assessed the survival in patients through 10 years after primary coronary artery bypass surgery. At 5-year follow-up there were no differences in graft patency or clinical outcomes between radial artery and right internal thoracic artery or saphenous vein grafts.

### 1372 Mitral valve repair with aortic valve replacement is superior to double valve replacement

*A. Marc Gillinov, MD, Eugene H. Blackstone, MD, Delos M. Cosgrove III, MD, Jennifer White, MS, Paul Kerr, DO, Antonino Marullo, MD, Patrick M. McCarthy, MD, and Bruce W. Lytle, MD, Cleveland, Ohio*

Double valve replacement has been advocated for combined aortic and mitral valve disease. This study demonstrates that in such patients, aortic valve replacement with mitral valve repair (1) is feasible in many, (2) improves late survival, and (3) is the preferred strategy when mitral valve repair is possible.

### 1388 Nominal size in six bileaflet mechanical aortic valves: A comparison of orifice size and biologic equivalence

*John B. Chambers, MD, FACC, Lionel Oo, FRCS, Andrew Narracott, PhD, Pat M. Lawford, PhD, and Christopher I. Blauth, MS, FRCS, London and Sheffield, United Kingdom*

We digitally photographed 29 bileaflet mechanical valves. The internal diameter ranged from 1.6 to 4.6 mm less than the manufacturer's nominal size. Biologic equivalence, as assessed with polypropylene blocks, ranged from 3.5 mm smaller to 3.5 mm larger than nominal size. Clearer sizing nomenclature is required.

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